

CLAIM AMENDMENTS

1. (currently amended) A process for decreasing energy usage in a polyethylene terephthalate production process where following polycondensation, polyethylene terephthalate is pelletized and crystallized, comprising

a) solidifying molten polyethylene terephthalate to form amorphous polyethylene terephthalate pellets and cooling the pellets to a temperature from about 50°C to about the T_g of the polyethylene terephthalate to form warm polyethylene terephthalate pellets; and

b) conveying said warm polyethylene terephthalate pellets to a crystallizer, wherein the temperature of the warm polyethylene terephthalate pellets is in the range of about 50° C to below the T_g of the polyethylene terephthalate at an inlet of the crystallizer.

2. (currently amended) The process of claim 1, wherein said step of conveying comprises introducing said warm pellets ~~from a step of pelletizing~~ into a stream of water having a temperature of between about 50°C and 90°C.

3. (original) The process of claim 2, wherein prior to said step of introducing said warm pellets into said crystallizer, water is removed from said warm polyethylene terephthalate pellets.

4. (original) The process of claim 3, wherein water is removed prior to or during said step of conveying.

5. (original) The process of claim 3, wherein water is removed by means of a foraminous screen.

6. (original) The process of claim 3, wherein water is removed in a mechanical dryer.

7. (original) The process of claim 5, wherein water is removed in a mechanical dryer.

8. (original) The process of claim 2, wherein said warm pellets have a temperature in the range of 70°C to 90°C at the inlet to said crystallizer.

9. (original) The process of claim 2, wherein said stream of water comprises water recirculated from a water removal step.

10. (original) The process of claim 6, wherein no heat energy is added to said dryer.

11. (original) The process of claim 1, wherein said step of conveying comprises introducing said warm pellets from said step of pelletizing into a gas stream.

12. (original) The process of claim 11, wherein said gas stream, prior to contact with said pellets, has a temperature in the range of 40°C to 90°C.

13. (original) The process of claim 11, wherein said gas stream, prior to contact with said pellets, has a temperature in the range of 50°C to 70°C.

14. (original) The process of claim 11, wherein prior to said step of introducing said warm pellets into said crystallizer, water from said steps of solidifying and/or pelletizing is removed from said warm polyethylene terephthalate pellets.

15. (original) The process of claim 14 wherein said water is removed in a mechanical dryer.

16. (original) The process of claim 11, wherein said warm pellets have a temperature in the range of 70°C to 90°C at the inlet to said crystallizer.

17. (currently amended) The process of claim 1, wherein prior to said step of pelletizing, water is removed from said solidified ~~strands~~ pellets by a blast of air.

18. (original) The process of claim 1, wherein said warm polyethylene terephthalate pellets are conveyed directly to said crystallizer without intermediate storage.